## ABSTRACT

**The values of blood pressure and pulse rate in dependence on the human body position.**

**The aim of the study:**

The pilot study originated within the framework of project „Specific school research 2010-261602“ with the aim of evaluation of blood pressure and pulse rate values in dependence on the human body position. Two groups of respondents were involved. Furthermore the comparison of the results in group of regular senior female trainees and the group of non-trainees was folowed by practical use of the acquired findings.

**The method:**

Quasiexperiment method for this study was used, since the group selection was not realized on random basis. The collective compiled of 22 senior women divided into two groups, eleven by eleven. The first group consisted of the women with the average age 67,7 (SD±6,8), practicing the sports on regular basis. The second group was represented by senior women agend 74,3 at average (SD±12,1) with no or just occasional sports activity. All the respondents were examined for blood pressure and pulse rate values in eight consecutive position. Pauses were taken in between all the measurements to prevent misrepresented data caused by increased physical activity.

**Hypotheses:**

1. We suggest the measurements in each of the groups of respondents will be different and for the benefit of regular trainees.
2. We suggest the differences between blood pressure and pulse rate values will be higher in standing/lying position and lying/standing position compared to sitting/all-fours kneeling position and all-fours kneeling/sitting position.

**The findings:** The hypothesis that the changes in the value measurements will be explicitly advantageous for all the variants in the group of senior female regular trainees was confirmed only partially. The most substantial changes related to systolic blood pressure. Since the blood pressure is affected by many factors and because of the pilot study with few respondents only, it is difficult to assess which of the factors played more significant role as for the changes in blood pressure and pulse rate values. On the contrary it was entirely and unambiguously confirmed that changes in the measured values are distinctively higher for 1,2 variants compared to 3,4 variants.



**Keywords:** blood pressure, pulse rate, human body position, senior women